USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2006CO115B

Title: Colorado's Evolving Irrigated Agriculture: Economic Accounting Impact Analysis

Project Type: Research

Start Date: 03/01/2006

End Date: 02/28/2007

Congressional District: 4th

Focus Category: Economics, Agriculture

Keywords: Arkansas River, Republican River, Rio Grand River, South Platte River

Principal Investigator: Waskom, Reagan M. (Colorado State University)

Federal Funds: $16,800

Non-Federal Matching Funds: $8,586

Abstract: Agricultural industry is asignificant economic sector in Colorado. Farming employed roughly 45,000 people in 2000. Seventy-five percent of the total value of Colorado crops is derived from the irrigated sector, highlighting the importance of, and dependence on, a secure water supply. Colorado's crop production supports commercial livestock, meat-packing and dairy industries. Each primary agricultural industrial sector encourages economic development directly, through the purchase of inputs, and indirectly, through the wages and salaries of employees. Rural to urban water transfers can create contentious and emotionally charged discussions which often center on the economic health of rural communities and their dependence on irrigated agriculture. The next greatest changes in agricultural water use are expected to occur in the Front Range as Municipal and Industrial (M & I) growth moves into agricultural lands and/or as water is transferred from agriculture to support growth. Water transfer will alter the economic and natural resource environment of rural Colorado, presenting a key challenge for all Coloradans. Without other viable local base industries to generate revenues and provide employment, a reduction in the revenue generated in the agricultural sector will have adverse economic impacts throughout the regional economy. Impacts will be felt by businesses and by local governments

whose property and sales tax base is eroded. Clearly, it is important to quantify and describe the economic shock of irrigated agriculture's reduction, to disaggregate the shock among different industries in the region and among households according to their income, and to determine how government revenues might shrink. This information will be valuable to many water stakeholders including farmers, businesses, water supply administrators, and regional leaders charged with economic development. A rigorous economic accounting will approximate the economic impacts of reduced irrigated acres. Analysis will be focused on four basins (Arkansas, Republican, Rio Grande, South Platte).

Specific objectives include:

- (1) Establishing economic demographics for each basin including population trends, housing demographics, labor and jobs by sector, local taxes, education and agriculture.
- (2) Developing a social accounting matrix (SAM) for each basin that represents the financial interactions between the basin industries.
- (3) Using the four SAM's, impact analysis will approximate the short-term economic affects of reduced irrigated acreage.

U.S. Department of the Interior, *U.S. Geological Survey*
URL: http://water.usgs.gov/wrri/06grants/2006CO115B.html
Maintained by: John Schefter
Last Updated: Wednesday, September 06, 2006